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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/685,136

10/14/2003

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BP3247

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03/23/2009

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EXAMINER

NGUYEN, TANH Q

ART UNIT

PAPER NUMBER

2182

MAIL DATE

DELIVERY MODE

03/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/685,136	Applicant(s) ROWLANDS, JOSEPH B.	
	Examiner TANH Q. NGUYEN	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,6,7,10,12,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6,7,10,12,15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on January 14, 2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 7,206,879 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6-7, 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites “wherein the access by the second bridge writes data to a location of the memory and a subsequent access by an agent to read the data in the memory conform to a producer-consumer protocol, wherein the second bridge corresponds to a producer and the agent corresponds to a consumer of the producer-consumer protocol” in lines 1-5. Claim 7 recites “wherein the data written by the second bridge to the memory comprises a payload and a flag” in lines 1-2. Claims 15-16 recite limitations that are similar to those recited in claims 6-7.

It is not clear what “**the access by the second bridge** writes data to a location of the memory” and “the data written by the second bridge” refer to - as claim 1 and

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claim 10 individually suggests an access by the first bridge to a memory instead of an access by the second bridge (last two lines of claim 1 and last three of claim 10), and the specification suggests data being written by the first bridge instead of the second bridge. Clarification is required.

4. The rejections that follow are based on the examiner's best interpretation of the claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3, 6-7, 10, 12, 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Keller et al. (US 6,714,994).

7. As per claim 1, Keller teaches a system (10, FIG. 1) for managing coherent data access through multiple nodes (16A-16D, FIG. 1), comprising:

a first data processing system forming a first node (16A, 16B, 16D – FIG. 1; 16B, 16D – FIG. 2), in which the first data processing system includes a first bridge (PPL 34, HB 28 – FIG. 2; col. 7, lines 18-21), a first interface (30A, 30B – FIG. 2 for 16A, 16B,

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16D of FIG. 1) and a memory (20A, 20B, 20D – FIG. 1) that is local to the first node, wherein the first node supports coherent and non-coherent traffic (coherent transaction data and non-coherent transaction data in data buffer 62 and host bridge 28, FIG. 11; col. 7, lines 14-21) and the memory stores cacheable data having coherency (col. 8, lines 2-8; col. 11, lines 8-26; col. 11, lines 52-56); and

a second data processing system forming a second node (16C – FIG. 1; 16C – FIG. 2) that supports coherent and non-coherent traffic (coherent transaction data and non-coherent transaction data in data buffer 62 and host bridge 28, FIG. 11), in which the second data processing system includes a second bridge (PPL 34, HB 28 – FIG. 2; col. 6, lines 55-57; col. 6, lines 65-67) and a second interface (30A, 30B – FIG. 2), the first and second interfaces coupling the first node to the second node (FIG.1 and FIG. 2), wherein when the second node receives a request from an external source (24A-24C, FIG. 1; 24A, FIG. 2) to access a coherent fabric of the memory (to access either memory 20A, 20B, or 20C – FIG. 1 which is coherent (col. 8, lines 2-8)), the second bridge identifies the first node as a remote node and transfers the request as an uncacheable access request to the first node (col. 7, lines 27-31; col. 11, lines 11-13; col. 11, lines 54-56) so that the uncacheable access request does not access a coherent fabric in the second node (col. 7, lines 27-31), and when the first bridge receives the uncacheable access request, the first bridge identifies the access to the memory as a local access in the first node and processes the uncacheable access request from the second node as a coherent access to access the coherent fabric of the memory in the first node (col. 8, lines 52-67; col. 16, line 60-col. 18, line 36).

Note that the claims merely requires “wherein the first node supports coherent and non-coherent traffic” and “a second node that supports coherent and non-coherent traffic”. To the extent claimed, host bridge 28 supports coherent and non-coherent traffic (HB 28, FIG.11, with CP standing for coherent packet and NCP standing for non-coherent packet). Note further that Keller teaches “host bridge 28 in processing nodes 16A, 16B, 16D may be idle” (col. 7, lines 20-21) – hence suggests the possibility of host bridge 28 in nodes 16A, 16B, 16D not being idle. In addition, Keller teaches “Other embodiments...are possible and contemplated” (col. 6, lines 19-20) - hence suggests I/O nodes connected to one or more of nodes 16A, 16B, 16D.

8. As per claims 3, 6-7, Keller teaches the request from the external source being a read or a write request to access the memory (col. 11, lines 8-26; col. 11, lines 52-56);

the second bridge generating a request for the first bridge to write data to the memory, and an agent of the first node (i.e. the first bridge) consuming the request - hence a producer-consumer protocol;

data written by the first bridge in accordance with the request generated by second bridge comprising a payload and a flag (col. 10, lines 45-52).

9. As per claims 10, 12, 15-16, the claims generally correspond to claims 1, 3, 6, 7, and are rejected on the same bases.

Examiner's note: *Examiner has cited particular page, column and line number(s) in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. Applicant needs to consider the references in their entirety as potentially teaching*

all or part of the claimed invention.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and verification of the metes and bounds of the claimed invention.

Response to Arguments

10. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to TANH Q. NGUYEN whose telephone number is (571)272-4154. The examiner can normally be reached on M-F (9:30AM-6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TARIQ HAFIZ can be reached on (571)272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TANH Q. NGUYEN/
Primary Examiner, Art Unit 2182

TQN: March 19, 2009